



PATENT #6
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Michael B. Ball

Serial No.: 09/427,123

Filed: October 22, 1999

For: MULTI-CHIP STACKED DEVICES

Examiner: R. Potter

Group Art Unit: 2822

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SUPPLEMENTAL REISSUE DECLARATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The undersigned declarant, Michael B. Ball, state and declare as follows:

I have reviewed the above-referenced continuing reissue application and in the Preliminary Amendment filed concurrently therewith on October 22, 1999. All errors corrected by the above-referenced continuing reissue application up to and including the date I sign this Supplemental Reissue Declaration arose without any deceptive intention on my part.

Specifically, the claims of U.S. Patent 5,291,061, of which the parent to the above-referenced application is a reissued patent, U.S. Patent Re. 36,613, are believed to be unduly limited in that they recite limitations not necessary to patentability of the claims.

An example of an error that existed in originally-issued U.S. Patent 5,291,061, claim 1 recited a multiple-die low profile semiconductor device comprising, among other elements, a

controlled, first, thin-adhesive layer "of about 0.001 inches" affixing a first die above the [lead-frame] paddle, a plurality of thin wires having a first low-loop wire bond to a plurality of first diebonding pads, said wire bond having a wire height above the bonding pad "of about 0.006 inches, a second thin-adhesive layer "of about 0.008 inches" affixing a second die above the first die, two additional dies affixed above the second die by additional subsequent layers of adhesive "of about 0.008 inches," and an encapsulated layer surrounding all dies, adhesive layers and thin wires wherein "a total encapsulated-package height" is about 0.110 inches.

As another example of the unduly-limited nature of the claims that originally issued in U.S. Patent 5,291,061, claim 2 recited a multiple-die low-profile semiconductor device comprising, among other elements, a controlled, first, thin-adhesive layer "of about 0.001 to 0.005 inches" affixing a first die above the [lead-frame] paddle and an "encapsulated layer surrounding all die adhesive layers and thin wires wherein a total encapsulation-layer height is "about 0.070 inches."

While some of the unduly limiting elements were removed from claim 1 during prosecution of the parent reissue application, which was ultimately allowed and issued as U.S. Patent Re. 36,613, claim 1 of U.S. Patent Re. 36,613 includes additional errors, the correction of which is sought in the above-referenced continuing reissue application.

For example, claim 1 of U.S. Patent Re. 36,613 recites both "diebonding" and "die-bonding". In addition, claim 1 recites "a first wire bond" in one location and refers to the same element as a "wire bond" in another location. Also, an encapsulation layer was recited as an "encapsulated layer".

In claim 2 of U.S. Patent Re. 36,613, a "low-loop wire bond" is recited as a "low-loop wire ball bond" and "first die-bonding pads" are referred to simply as "bonding pads".

Another example of an error that occurred during prosecution of U.S. Patent 5,291,061 is the failure to pursue claims drawn to other inventive subject matter disclosed in the specification thereof. In particular, claims drawn to methods for fabricating a multiple-die, low-profile semiconductor device were never pursued during the prosecution of U.S. Patent 5,291,061.

Claims 3-12 of the above-referenced continuing reissue application recite methods for fabricating a multiple-die, low-profile semiconductor device.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to be material to patentability of the subject matter claimed in this application, as "materiality" is defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 3/10/2002

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